

### **In the Claims**

Claim 1 (original): An apparatus having a control circuit which comprises a feedforward filter arrangement (1) and a controller (3), characterized in that an adaptation of the parameters ( $P_{ff}$ ) of the feedforward filter arrangement (1) and the parameters ( $P_c$ ) of the controller (3) is effected during operation of the apparatus.

Claim 2 (original): An apparatus as claimed in claim 1, characterized in that for the adaptation an adaptation algorithm is executed on a microprocessor (4), particularly a digital signal processor (4).

Claim 3 (original): An apparatus as claimed in claim 1 or 2, characterized in that said apparatus includes a disk drive (5) for storage disk media, in which vibrations and internal disturbances which occur during operation of the apparatus are compensated by an adaptation of the parameters ( $P_{ff}$ ) of the feedforward filter arrangement (1) and the parameters ( $P_c$ ) of the controller (3).

Claim 4 (previously submitted): A method for responding to effects on precision of positioning of a scanning element in a disk drive, the method comprising:

- sensing forces acting the disk drive;
- converting detected forces into disturbance signals;
- applying the disturbance signals to a feed forward filter to obtain a disturbance variable;
- applying the disturbance variable to a controller;
- adjusting the disk drive for errors using the controller;
- receiving reference variables, error signals, and control variables at a processor;
- providing outputs from the processor to alter parameters of the feed forward filter and the controller.

Claim 5 (previously submitted): The apparatus of claim 1, wherein the controller comprises

- an error signal input, for receiving error signals responsive to operation of a controlled device;

- an input for receiving adapted control parameters, relative to variations in type of external disturbances of the controlled device; and
- a control variable output for supplying signals for controlling the controlled device responsive to both the error signal and the adapted control parameters.